



HQ CIVIL WORKS ENGINEERING NOTES

Volume III Number 4

9 January 1998

Notes from Steve Stockton, Chief, Engineering Division

By the time you receive this issue of the HQ Civil Works Engineering Notes, you will have probably heard that I have been dual hatted as Acting Chief, Planning Division in addition to my normal position as Chief, Engineering, Civil Works. This is a temporary detail only until a new SES is selected and approved to replace Dr. G. Edward Dickey who has retired. I am looking forward to the new challenges that this detail will present in both the management arena and in the technical areas. It will be a special challenge in managing my time during this period. As such, I will have to rely heavily on my Deputy Chief of Engineering to handle much of the day-to-day action for Engineering Division. I request that you contact Mr. Philip M. "Phil" Brown at (202) 761-4536 if you are having trouble getting in touch with me. Mr. Brown is an experienced member of the Engineering Division staff and is authorized to act on any item when I am not available.

The job announcement of the Chief, Planning Division, has been issued and a copy is included in Appendix A. I encourage all GS-15's and other qualified individuals with an interest in planning to consider applying for this position.

I hope that each of you had a Happy Holiday Season and are looking forward to a good year in 1998. [Stockton, (202) 761-0215 or (202) 761-0115 while in Planning]

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training seminar, *Application of Mitigation Strategies for Dam Safety*, will be issued shortly. Copies of course information will be sent by E-mail to all dam safety coordinators. The seminar is being held at the FEMA National Emergency Training Center in Emmitsburg, Maryland. This year's seminar will feature presentations on the dam safety programs and specific projects of various Federal Agencies and States. Steve Stockton (CECW-E), Bob Penniman (CEMVP), and John Wise (CESWF) will be making presentations.

The seminar will start at 0745 on Wednesday, 18 February, and end around 1600 on Thursday, 19 February. Details on accommodations (available in nearby Thurmont, Maryland and Gettysburg, Pennsylvania) will also be distributed along with the course information. [Bank, (202) 761-1660]

Centers of Expertise (CX) Regulation Being Readied for Publication

ER 1110-1-8158, *Corps-Wide Centers of Expertise Program*, will soon be signed. The new program features two types of centers, mandatory and voluntary. The category of *Mandatory Centers of Expertise* (MCX), will continue to exist. A *Directory of Expertise* (DX) will be created to replace the current Technical Centers of Expertise and Support Centers. The DX will consist of both organizations and individuals identified as experts in certain critical disciplines. The regulation also establishes the Internet as the primary source of information on the CX program, and implements new processes for approval of CX.

Once the regulation is signed, the CX Program Manager will meet with Headquarters CX Proponents to discuss the new processes for CX approval. Starting from the date the regulation is issued, there will be a six-month time frame for existing MCX to be recertified, and a four-month time frame for conversion of Technical Centers of Expertise and Support Centers to the DX. New CX's can be established at any time. [Bank, (202) 761-1660]

Deletion of PROSPECT Course 'Concrete Technician, Grade 1' (Course No. 031)

The subject course will be deleted from PROSPECT training program in 1999 due to the continuing decrease in interest from field and the availability of similar training/certification program in other organizations. The purpose of this course was to provide the students with the necessary knowledge and technique to become certified as a ACI Concrete Field Testing Technician, Grade 1. Similar training programs and examinations are widely available from various organizations throughout the country at a fraction of the cost charged by PROSPECT program. Appendix B lists the contact points for the certification program in these organizations.
[Lee, (202) 761-0412]

CWE INFORMATION

USACE Bridge Safety Program - Simplified Pedestrian Bridge Inspection Reports

ER 1110-2-111, Periodic Safety Inspection and Continuing Evaluation of USACE Bridges, provides policies and guidelines for inspection and evaluation of all bridges owned and maintained by the USACE. Questions have been asked concerning the costs for implementing bridge safety inspection and the inventory in accordance with the ER.

The ER is developed to comply with the provisions of PL 100-17. However, we have tried to limit specific requirements in order to reduce your cost for implementing your bridge safety program. Following is a brief summary of these requirements:

- a. All vehicle and pedestrian bridges owned and maintained by USACE must be inspected by a qualified structural engineer, and must be included in the USACE bridge inventory system (CEBIS). This does not include bridges which are part of projects turned over to local sponsors.
- b. All public access vehicular bridges which required a 2 year inspection interval must be inspected per the National Bridge Inspection Standards. Other bridges may be inspected based on schedules approved by MSC's, in consultation with HQUSACE. This permits most bridge inspections to be coordinated with periodic inspection schedules and allows grouping inspections as needed to be cost effective.
- c. A report is required for each bridge inspection and a separate report is appropriate for most bridges. For pedestrian bridges this report can be very brief and should not require much effort to prepare. We are developing a simplified Structure Inventory and Appraisal (SI&A) sheet (see enclosure 1) which should be available by February 1998. This abbreviated form provides the bulk of the report information needed for most pedestrian bridges. For non-public access pedestrian bridges it might be appropriate to include the bridge inspection reports as an appendix to the periodic inspection report for the project.
- d. The inspection report format and content for all vehicular bridges shall be prepared per Appendix E of the ER. However, the report format and content for pedestrian bridges can be simplified as described below:
 - (1) Front cover page: Statement of Inspection Review and Approval, Appendix D of the ER.
 - (2) The first page after the cover page should be the Pedestrian SI&A sheet.
 - (3) The second page should be the Inspection Sheet (see CEBIS inspection report sheet).
 - (4) The third page should be the Maintenance sheet (see CEBIS maintenance sheet).
 - (5) The fourth page should be the calculation for load rating as needed.

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- (6) The last page should be the photos to show severe damaged or deteriorated areas as needed.

There are a total of 4 pages for a pedestrian bridge inspection report if the structural condition has not changed since the last inspection and is in good condition. The SI&A, Inspection, and Maintenance sheets can be printed out from the CEBIS.

e. The majority of our non-public access bridges are small and several bridges can be scheduled for inspection at the same period. One report is adequate to include the bridges inspected within the same period.

The requirements of ER 1110-2-111 can be executed at relatively minor cost. Funding for these requirements should be obtained by submitting requests as part of the annual Operations and Maintenance budget process.

If you have any questions or need any additional clarification, contact CECW-ED. [Tan, (202) 761-8671]

DID YOU KNOW

Remote Robotic Condition Inspection/Assessment of Metallic Structures via FURY

The U.S. Army Construction Engineering Research Laboratories (CERL) has developed a remotely operated robotic system (FURY) capable of assessing the condition of metallic structures. Ultrasonic thickness measurements are taken at a rate of 30 per second while the magnetically coupled robot navigates around obstacles. Position information is fed back to a Windows based operator console and data acquisition system. The robot is able to traverse up to a 1/2-in. high lap joint, fit through a 4-in. access opening, and make transitions onto surfaces oriented at 90-degrees to the original travel surface. Combined and/or related services also available include corrosion assessment, cathodic protection design review and/or operational trouble shooting, materials selection, and, life prediction. Limitations of the current design include a 150-ft. tether and the ability to be immersed in no more than 30-ft. of water. For more information, the CERL points of contract on this subject are Dr. Charles Marsh at 217-373-6764 and Mr. Vincent Hock at 217-373-6753. [Wu, (202) 761-8614]

YOU ASKED

We received one question concerning the draft Project Management regulation. Since the finalizing the regulation has been delayed, the question will be held until a more specific answer can be furnished.

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Questions are needed by the 15th of the month for the next issue of HQ CIVIL WORKS ENGINEERING NOTES. Questions can be sent by FAX to (202) 761-4002 or by e-mail to Charles Pearre. [Pearre, (202) 761-4531]

DAM SAFETY PROGRAM

National Inventory of Dams Update

The ICODS subcommittee on the National Inventory of Dams (NID) held its second meeting on 10 December 1997 in Washington, DC. Representatives from four Federal Agencies and four individuals from the Association of State Dam Safety Officials (ASDSO) participate on the subcommittee. The major goals of the subcommittee include completing a more accurate and user-friendly update of the NID. The subcommittee is hammering out an aggressive schedule with a goal of updating the NID in 1998 utilizing an improved process. The new NID update process being developed will allow Internet updating, will include additional information on each dam, and will feature GIS capabilities. We are also developing provisions for data security and a World Wide Web accessible GIS interface to NID data. Ideas solicited from the field for improvements to the NID are being incorporated in this update. [Bank, (202) 761-1660]

Corps of Engineers / Federal Emergency Management Agency Relationship on Dam Safety

An information paper on the relationship of the Corps of Engineers and the Federal Emergency Management Agency in the dam safety arena was prepared during December 1997 and is included in Appendix C for your information. [Pearre, (202) 761-4531]

District submissions of dam safety items of interest, including dam safety incidents (Corps or other), for inclusion in this section are requested. Information is needed by the 15th of each month. [Pearre, (202) 761-4531]

FIELD INFO TO SHARE

Districts are encourage to submit information for this section. Also, tell us your ideas on how HQ CWE can do it better and what you would like to know about. Your information is needed by the 15th of the month for the next issue. [Wallace, (202) 761-8890]

REMINDER

These HQ Civil Works Engineering Notes are now available on the Internet. You can the access the Notes directly at "<http://www.usace.army.mil/inet/functions/cw/cecwe/notes/>".